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| 10/611,471 | 06/30/2003 | Yan Feng | P3510 | 1591 |

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| EXAMINER |
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| WU, RUTAO |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

| | | Application No. | Applicant(s) |
| | | 10/611,471 | FENG ET AL. |
| **Office Action Summary** | | Examiner | Art Unit | |
| | | Rob Wu | 3628 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>05 July 2007</u>.

2a)☒ This action is **FINAL**.          2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-38* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *  c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

## DETAILED ACTION

### *Status of Claims*

1.      In response file on July 05 2007, the applicant amended claims 1, 16, 25, 28, 32

and 36.  Claims 1-38 are pending in the current application.

### *Response to Arguments*

2.      Applicant's arguments filed July 05 2007 have been fully considered but they are

not persuasive.

Regarding claim 1, the applicant amended the limitations to now recite:

"...
a data repository accessible to the server node for storing a plurality of pricing
data models wherein each model is an object-oriented data structure and completely
defines the client, a channel, and a product category, to generate the requested pricing
results including rules for manipulating the model;
characterized in that the server node receives requests for pricing, identifies the
client making the request and accesses at least one pricing data model matching the
identity having rules created for pricing factors used in at least one pricing sequences to
price an item or items of the request and uses the pricing application to calculate the
correct pricing results including sub totals and total amounts for the request based on
sorting and conflict resolution of the rules accessed for each factor, according to the
selected model."

The applicant alleges that Carter (U.S. Pat No. 5,878,400) fails to teach object-

oriented pricing models completely defining the client, a channel, and a product

category, to generate the requested pricing results.  The Examiner respectfully

disagrees.  Channels as defined by the applicant "are the client grouping vehicles and

customers or clients are assigned to specific channels.  Channels, more particularly

define clients by categories." ([0052] of specification) Carter disclose a Customer Type

indicator that defines customers into categories such as Reseller, VAR and End-User.

(col 6: lines 30-31) Furthermore, in Fig 5, Carter shows a pricing model utilized in the

invention. Column 42 contains information as to "who" is the purchaser of the product

being sold. Column 46 contains information as to "what" product is being purchased

and column 44 is designated a "how much" column. (col 8: lines 41-47) In looking at Fig

5 it can clearly been seen that in this price model, the client, the channel of the client

and the product category are all identified in order to generate the requested pricing

results. Another example presented by Carter can be found in column 10 lines 1-21

where it is clearly defined that in a request to determine the pricing results of the

particular product, the client, channel and product are all defined and used as rules for

manipulating the pricing model. With regards to applicant's limitation that each model is

an object-oriented data structure, it is defined by the Microsoft Press Computer

Dictionary Second Edition that object-oriented is an adjective applied to any system or

language that supports the use of objects, and object is further defined as a shorthand

term for object code (machine readable code); or in object-oriented programming, a

variable comprising both routines and data that is treated as a discrete entity. (Page

276) Carter does not expressly disclose object-oriented data structures, however, in

looking through Carter's disclosure, it is clear that Carter's invention is done with object-

oriented programming since there are numerous object variable used, (such as

geography, customer type, etc). Even if the applicant does not agree that it is clear

from Carter's disclosure that pricing models are object-oriented data structures, Carter

specifically disclose that his invention may be implemented in any type of computer

system or programming or processing environment. (col 5: lines 56-58)  Therefore, it

would have been obvious at the time of the invention for Carter to use object-oriented

programming to encapsulate pricing models as object-oriented data structures.  Carter's

motivation would be his specific disclosure and the fact that object-oriented data

structures and programming are well known in the arts.


### *Claim Rejections - 35 USC § 102*

3.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.      Claims 25, 27-31 are rejected under 35 U.S.C. 102(b) as being anticipated by

U.S. Pat No. 5,878,400 to Carter, III.

**Referring to claim 25:**

In an automated pricing system for calculating pricing for items and item orders,

the system including a pricing application running on a server node, and a data

repository accessible to the server node for storing a plurality of object oriented pricing

data models and including rules for manipulating the model, a method for price

calculation of an item in the pricing request comprising steps of:

(a) receiving the pricing request for processing, identifying a client making the

request and selecting at least one of a plurality of pricing data models from the data

repository associated with the client, the models completely define the client, a channel, and a product category, to generate the requested pricing results; (col 8: lines 41-47; col 10 lines 1-21; col 19: lines 4-6; Fig 5 and 15B )

(b) identifying an item pricing sequence comprising pricing factors used in calculating, according to the model; (col 18: lines 52-55)

(c) accessing the rules for the first listed factor in the sequence having associated rules; (col 19: lines 21-23)

(d) sorting the rules based on constraint matching to parameters in the request; (col 19: lines 23-40)

(e) eliminating those rules that do not match the request parameters; (col 19: lines 42-43)

(f) applying the value of the remaining rule that most closely matches the request parameters to the factor; (col 19: lines 16-20)

(g) repeating steps (c) through (f) for each factor in the sequence that has associated rules; and (col 19: lines 21-40)

(h) calculating the price of the item using the values assigned to the factors of the sequence. (col 19: lines 43-50)

**Referring to claim 27:**

The method of claim 25 wherein in step (b) the pricing sequence is an item pricing sequence selected by default according to the pricing model. (col 18: lines 60-63)

**Referring to claim 28:**

The method of claim 25 wherein in step (c) the rules are accessed from a data repository containing the pricing model data. (col 19 lines 4-6)

**Referring to claim 29:**

The method of claim 25 wherein in step (c) the rules for the factor specify necessarily, the item being processed, a customer requesting the item pricing, and the sequence factor associated with the rule, and optionally, an item category associated with the item, an effective data of the rule, and expiry date of the rule, and the minimum and maximum quantity ranges of the item ordered. (col 18: lines 65-67)

**Referring to claim 30:**

The method of claim 25 wherein in step (d) the parameters in the request specify, a request date, a customer that initiated the request, the item being processed, and the sequence used to calculate the pricing, and optionally, a contract date, a sales channel, and attributes assigned to the customer, item, and channel. (col 19: lines 6-9)

**Referring to claim 31:**

The method of claim 25 wherein an additional step is required between steps (e) and (f) for conflict resolution in case of more than one candidate rule remaining after step (e) (col 19: lines 21-40)


*Claim Rejections - 35 USC § 103*

5.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.      Claims 1-24, 32-38 are rejected under 35 U.S.C. 103(a) as being unpatentable

over U.S. Pat No. 5,878,400 to Carter.

**Referring to claim 1:**

An automated pricing system for calculating pricing for items and item orders for

clients accessing the system comprising:

A server node connected to a data network for serving pricing information; (col 5:

lines 58-60)

A pricing application running on the server node for calculating the pricing

information served; and (col 5: lines 58-60)

A data repository accessible to the server node for storing a plurality of pricing

data models where each model is an object-oriented data structure and completely

defines the client, a channel, and a product category, to generate the requested pricing

results including rules for manipulating the model; (col 8: lines 41-47; col10 lines 1-21;

col 19: lines 4-6; Fig 5 and 15B)

Carter discloses that when a customer is selected in the present invention, all of

the groups to which that customer belongs, and all pricing adjustments for which each

group is eligible, are identified. (col 3: lines 29-33) From the disclosure it can be seen

that Carter teaches the pricing data model includes rules for manipulating the model. It

is obvious that Carter's pricing data model includes the rule to find all of the price

adjustments available.

Carter does not expressly disclose object-oriented data structure. However, Carter specifically disclose that his invention may be implemented in any type of computer system or programming or processing environment. (col 5: lines 56-58) Therefore, it would have been obvious at the time of the invention for Carter to use object-oriented programming to encapsulate pricing models as object-oriented data structures. Carter's motivation would be his specific disclosure and the fact that object-oriented data structures and programming are well known in the arts.

Characterized in that the server node receives requests for pricing, identifies the client making the request and accesses at least one pricing data model matching the identity having rules created for pricing factors used in at least one pricing sequence to price an item or items of the request and uses the pricing application to calculate the correct pricing results including sub totals and total amounts for the request based on sorting and conflict resolution of the rules accessed for each factor, according to the selected model. (col 9: lines 43-67, Fig 5 and 15B)

### Referring to claim 2:

The pricing system of claim 1 wherein the data network is the Internet network. (col 5: lines 58-60)

### Referring to claim 3:

The pricing system system of claim 1 wherein the data network is a local area network connected to the Internet network. (col 5: lines 61-65)

### Referring to claim 4:

The pricing system of claim 1 wherein pricing requests are received from a business-to-business server connected to the data network the requests generated in an automated fashion and routed to and queued in the pricing server for processing. (col 5: lines 55-57)

**Referring to claim 5:**

The pricing system of claim 1 wherein the pricing requests are received from clients accessing an enterprise hosted Web server connected to the data network, the requests routed to and queued in the pricing server for processing. (col 5: lines 61-65)

**Referring to claim 6:**

The pricing system of claim 1 wherein the requests are received from a client operating from a wireless network-capable device through a wireless interface having connection to the data network, the requests routed to and queued in the pricing server for processing. (col 5: lines 61-65)

**Referring to claims 7 and 20:**

Carter does not expressly disclose the pricing system of claim 1 wherein the pricing requests are received from a third-party price configuration application running on a node connected to the data network. Carter states that the invention is typically implemented with a remote terminal or computer which communicates with the server via a wired or wireless connection. (col 5: lines 56-58, 63-64) Therefore, it is obvious that Carter's invention can be used with a third-party application, such as a web browser, running on a node connected to the data network.

**Referring to claim 8:**

The pricing system of claim 1 wherein the served pricing information is item

pricing generated in the form of a pricing list. (col 9: lines 59-67)

### Referring to claims 9 and 21:

Carter does not expressly disclose the pricing system of claim 1 wherein the

pricing information includes indication of profit margin for each item and for the order.

However, Carter does disclose knowing the Base Cost of the products and having the

Base Cost as an override operation. (col 15: lines 1-3) Therefore, it is obvious Carter

knows the profit margin of the products. It can simply be calculate from the known Base

Price and the Final price.

### Referring to claim 10:

The pricing system of claim 1 wherein there are multiple pricing models

applicable to different pricing methods. (col 6: lines 22-31)

### Referring to claims 11 and 13:

The pricing system of claim 10 wherein the methods include product-based

pricing, product scope pricing, contract pricing, tiered pricing, and bundled pricing. (Fig

7)

### Referring to claim 12:

The pricing system of claim 1 wherein there is one pricing model extensible to

reflect multiple pricing methods. (col 7: lines 54-63)

### Referring to claim 14:

The pricing system of claim 1 wherein the repository is part of a legacy system.

(col 5: lines 18-20)

### Referring to claim 15:

The pricing system of claim 1 wherein pricing rules are accessed and, sorted and resolved for conflict in sequence for each listed factor having rules in the order that each factor exists in the at least one pricing sequence starting with the first factor in the first sequence. (col 19: lines 20-40)

### Referring to claim 16:

An automated pricing system for calculating pricing for items and item orders comprising:

A pricing server component for calculating pricing based on pricing factors used in at least one pricing sequence; (col 3: lines 56-62)

A software application suit for calculating prices for pricing requests received by the system further comprising:

A pricing management application for creating a plurality of pricing models and for updating and editing the at least one models; (col 12: lines 46-49, 62-65)

A model validation component for testing the integrity of the pricing models; (Fig 6-14)

A pricing list generator for generating line item pricing lists; and (col 10: lines 18-21)

At least one application program interface for enabling third-party applications of varying platforms to communicate with the pricing server component; (col 5: lines 55-60)

Characterized in the pricing requests received are handled by the software

application in automated fashion by identifying a client requesting pricing, accessing at

least one pricing data model associated with the identified client for one or a

combination of product-based pricing, product scope pricing, contract pricing, tiered

pricing, and bundled pricing scenarios, wherein each model is an object-oriented data

structure and completely defines the client, a channel, and a product category, to

generate the requested pricing results by at least matching rule constraints to requests

parameters for each pricing factor in a given pricing sequence used by the application to

calculate pricing for a given request, according to the selected model. (col 8: lines 41-

47; col10 lines 1-21; col 14: lines 15-34; col 19: lines 4-6; Fig 5, 7 and 15B)

Carter does not expressly disclose object-oriented data structure. However,

Carter specifically disclose that his invention may be implemented in any type of

computer system or programming or processing environment. (col 5: lines 56-58)

Therefore, it would have been obvious at the time of the invention for Carter to use

object-oriented programming to encapsulate pricing models as object-oriented data

structures. Carter's motivation would be his specific disclosure and the fact that object-

oriented data structures and programming are well known in the arts.

**Referring to claim 17:**

The system of claim 16 wherein pricing requests are received from a business-

to-business server having data-network-access to the application suit, the requests

generated in an automated fashion and routed to and queued in a machine hosting the

server component of the application. (col 5: lines 55-57)

### Referring to claim 18:

The system of claim 16 wherein the pricing requests are received from clients having data-network-access to an enterprise hosted Web server connected to the data network, the requests routed to and queued in a machine hosting the server component of the application. (col 5: lines 61-65)

### Referring to claim 19:

The system of claim 16 wherein the requests are received from a client operating from a wireless network-capable device through a wireless interface having access to the application, the requests routed to and queued in the pricing server for processing. (col 5: lines 61-65)

### Referring to claim 22:

The system of claim 16 wherein there are multiple pricing models applicable to different pricing methods. (col 6: lines 22-31)

### Referring to claim 23:

Carter does not expressly disclose the system of claim 16 wherein the third-party applications used the at least one API for translating platform dependent markup languages to enable cross communication between a client platform and the platform hosting the software application.  However, Carter discloses that his invention may be implemented in any type of computer system or programming or processing environment.  Carter further states that the invention is typically implemented with a remote terminal or computer which communicates with the server via a wired or wireless connection. (col 5: lines 56-58, 63-64)  Therefore, it is obvious that Carter's

invention can be used with a third-party application, such as a web browser, which

translates with platform dependent markup language and is able to cross communicate

between a client platform and the platform hosting the software application.

### Referring to claim 24:

Carter discloses the following:

The system of claim 23 wherein client platforms capable of cross-communication

with the software application include CTI telephony platforms including Interactive Voice

Response systems, platforms using Wireless Markup Language, Voice over Internet

Protocol, Hypertext Markup Language, and Extensible Markup Language. (col 5: lines

55-67)

### Referring to claim 32:

In an automated pricing system for calculating pricing for items and item orders,

the system including a pricing application running on a server node, and a data

repository accessible to the server node for storing a plurality of object-oriented pricing

data models including rules for manipulating the models, a method for price calculation

of the total figure of multiple items in the pricing request comprising steps of:

Carter discloses that when a customer is selected in the present invention, all of

the groups to which that customer belongs, and all pricing adjustments for which each

group is eligible, are identified. (col 3: lines 29-33) From the disclosure it can be seen

that Carter teaches the pricing data model includes rules for manipulating the model. It

is obvious that Carter's pricing data model includes the rule to find all of the price

adjustments available.

(a) receiving a pricing request from a client (col 19: lines 4-6)

(b) identifying the client and accessing at least one of the data models associated with the client, the model completely defining the client, a channel, and a product category, to generate the requested pricing results; (col 8: lines 41-47; col10 lines 1-21; col 19: lines 4-6; Fig 5 and 15B)

(c) identifying an order pricing sequence comprising factors used in calculating totals according to the at least one pricing data model; (col 19: lines 43-50)

(d) accessing rules for the first listed factor in the sequence having associated rules; (col 19: lines 21-23)

(e) sorting the rules based on constraint matching to parameters in the request; (col 19: lines 23-40)

(f) eliminating those rules that do not match the request parameters; (col 19: lines 42-43)

(g) applying the value of the remaining rule that most closely matches the factor; (col 19: lines 16-20)

(h) repeating steps (d) through (g) for each factor in the sequence that has associated rules; and (col 19: lines 21-40)

(i) calculating the order total for the order using the values assigned to the factors of the sequence. (col 19: lines 43-50)

**Referring to claim 33:**

The method of claim 32 wherein in step (c) the order pricing sequence is selected by default according to the pricing model. (col 18: lines 60-63)

### Referring to claim 34:

The method of claim 32 wherein in step (d) the rules are a part of the pricing

model data. (col 19 lines 4-6)

Carter discloses that when a customer is selected in the present invention, all of

the groups to which that customer belongs, and all pricing adjustments for which each

group is eligible, are identified. (col 3: lines 29-33) From the disclosure it can be seen

that Carter teaches the pricing data model includes rules for manipulating the model.  It

is obvious that Carter's pricing data model includes the rule to find all of the price

adjustments available.

### Referring to claim 35:

The method of claim 32 wherein in step (i) the order reflects one or a

combination of a bundle discount, a group discount, and a volume discount. (Fig 7)

### Referring to claim 36:

The method of claim 32 wherein an additional step is required between steps (f)

and (g) for conflict resolution in case of more than one candidate rule remaining after

step (e). (col 19: lines 21-40)

### Referring to claim 37:

The method of claim 25 wherein the conflict resolution step resolves rule conflicts

according to a specified conflict resolution order specified in the factor being processed.

(col 19: lines 21-40)

### Referring to claim 38:

The method of claim 36 wherein the conflict resolution step resolves rule conflicts according to a specified resolution order specified in the factor being processed. (col 7: lines 14-29)

### Conclusion

7.     Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
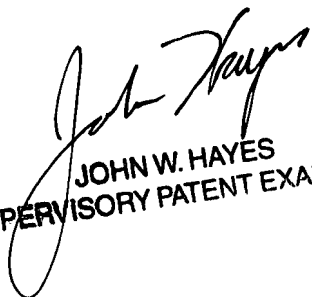
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rob Wu whose telephone number is (571)272-3136. The examiner can normally be reached on Mon-Fri 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Hayes can be reached on (571)272-6708. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

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rw

JOHN W. HAYES
SUPERVISORY PATENT EXAMINER